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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,234	09/30/2003	Richard H. Breinlinger	SAA-65-1	1579

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EXAMINER
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JAGAN, MIRELLYS

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/673,234

Applicant(s)

BREINLINGER, RICHARD H.

Examiner

Mirellys Jagan

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 21,23-30 and 32-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21 and 24-26 is/are allowed.
- 6) ☒ Claim(s) 28 and 34-39 is/are rejected.
- 7) ☒ Claim(s) 23,27,29,30,32 and 33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/30/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claims 23, 27, 29, 30, 32, and 33 are objected to because of the following informalities:

In claim 23, “further comprising” should be deleted since additional elements of the system are not being claimed.

In claim 27, the specification fails to disclose the I/O module hosting the A/D converter and the current source. The specification states that the I/O module may host a temperature unit, which comprises a diode, A/D converter, current source, and a processor (which may be external to the temperature unit). Therefore, claim 27 should include the diode since the I/O module is disclosed as hosting a diode, A/D converter, and current source.

In claim 29, there is lack of antecedent basis in the claim for “the processor unit” in lines 7-8. Also, it is not clear if the processor claimed in line 14 is referring to the same processor unit of lines 7-8. Lastly, it is not clear what element the “means for controlling the current source” is referring to, e.g., is the means the processor itself?

In claim 30, it is not clear what element the “means for producing a digital output” is referring to, e.g., is the means the processor itself?

In claim 33, there is lack of antecedent basis in the claim for “the means for determining the temperature”. Furthermore, it is not clear how the means for determining the temperature, i.e., the processor unit, is hosted by two different elements, the controller (see claim 29) and the I/O module, simultaneously.

Art Unit: 2859

Claim 32 is objected to for being dependent on an objected base claim. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 34-39 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

In claim 34, the structural cooperative relationships between the network and the components of the system are not clearly claimed, e.g., the current source and converter appear to be elements separate from the temperature unit that are connected to the network, the temperature unit, and a processor that is also connected to the network. Therefore, since it is not clear how all of the elements are connected to the network as claimed, prior art has not been applied to claim 34.

In claim 35, the structural cooperative relationship between the I/O module with the controller and the temperature unit is not clearly claimed, e.g., it is not clear how the I/O module is coupled to both the controller and the temperature unit, since the controller and the temperature unit are coupled to the network at different locations (see claim 34).

Claims 36-39 are rejected for being dependent on a rejected base claim.

***Claim Rejections - 35 USC § 102***

Art Unit: 2859

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 29 is rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,554,469 to Thomson et al [hereinafter Thomson].

Thomson discloses a method comprising:

controlling a current source (12) such that the source sequentially applies a first current (I1) to a diode at a first point in time, and applies a second current (I3) to the diode at a second point in time;

measuring a first analog voltage ( $V_{be1}$ ) across the diode when the first current (I1) is applied to the diode in order to produce a first analog voltage measurement ( $\Delta V_{be1}$ );

measuring a second analog voltage ( $V_{be3}$ ) across the diode when the second current (I3) is applied to the diode in order to produce a second analog voltage measurement ( $\Delta V_{be2}$ );

sequentially digitizing the first ( $\Delta V_{be1}$ ) and second ( $\Delta V_{be2}$ ) analog voltage measurements in an integrated circuit (20) comprising an A/D converter (24);

determining a temperature proximate the diode based in the first and second digitized voltage measurements; and

providing a controller (not shown) hosting a processor unit (26) for controlling the current source and determining the temperature proximate the diode (see figures 1 and 4; column 2, lines 59-63; column 4, lines 35-59; and column 5, lines 1-6).

*Allowable Subject Matter*

6. Claims 21 and 24-26 are allowed.
7. Claims 23, 27, 29, 30, 32, and 33 would be allowable if amended to overcome the objections set forth in this Office action.
8. The following is a statement of reasons for the indication of allowable subject matter:  
  
The prior art of record does not disclose or suggest the following in combination with the remaining limitations of the claims:  
  
A system for automated temperature measurement comprising a processor unit configured to obtain a digital measure of a first voltage across the diode from the converter when the first current is applied to the diode, and obtain a digital measure of a second voltage across the diode from the converter when the second current is applied to the diode; and a controller configured to host the processor unit (see claim 21).  
  
A system for automated temperature measurement comprising means for sequentially digitizing the first and second analog voltages measurements with an integrated circuit, and a controller configured to host the processor unit and the means for controlling the current source (see claim 29).

*Response to Arguments*

9. Applicant's arguments with respect to claims 21, 23-30, and 32-39 have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents and publication disclose a temperature-sensing network or system:

U.S. Patent 6,695,469 to Leonhardt

U.S. Patent 6,567,763 to Javanifard et al

U.S. Patent 5,490,059 to Mahalingaiah et al

U.S. Patent Application Publication 2003/0158697 to Gold et al

U.S. Patent 6,460,005 to Chang

U.S. Patent 6,283,628 to Goodwin

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mirellys Jagan whose telephone number is 571-272-2247. The examiner can normally be reached on Monday-Friday from 11AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2859

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MJ  
March 15, 2005

**GAIL VERBITSKY  
PRIMARY EXAMINER**